REPORT

Transport Statement (with Outline Construction Traffic Management Plan)

Proposed Battery Energy Storage System, Spittal

Client: Field Spittal Ltd

Reference: PC3506-RHD-07-XX-RP-Z-0015

Status: Final/01

Date: 12 December 2024

Royal HaskoningDHV

Enhancing Society Together

HASKONINGDHV UK LTD.

Westpoint
Peterborough Business Park
Lynch Wood
Peterborough
PE2 6FZ
United Kingdom
Mobility & Infrastructure

Phone: +44 1733 3344 55
Email: info@uk.rhdhv.com
Website: royalhaskoningdhv.com

Document title: Transport Statement (with Outline Construction Traffic Management Plan)

Subtitle: Proposed Battery Energy Storage System, Spittal
Reference: PC3506-RHD-07-XX-RP-Z-0015
Your reference
Status: Final/01
Date: 12 December 2024
Project name: PC3506
Project number: PC3506
Author(s): SH

Drafted by: SH

Checked by: PM

Date: 12/12/24

Approved by: LW

Date: 18/12/24

Classification
Project related

Table of Contents

Table of Figures

Table of Tables

Appendices

Glossary of Acronyms

Acronym	Description
AADT	Annual Average Daily Traffic
AIL	Abnormal Indivisible Load
ATC	Automatic Traffic Count
BESS	Battery Energy Storage System
CTMP	Construction Traffic Management Plan
DfT	Department for Transport
ECU	Scottish Government Energy Consents Unit
EIA	Environmental Impact Assessment
HGV	Heavy Goods Vehicle
HIAB	Hydraliska Industry AB (crane loader)
HV	High Voltage
LDP	Local Development Plan
LGV	Light Goods Vehicle
LV	Low Voltage
MV	Medium Voltage
MW	Megawatts
OCTMP	Outline Construction Traffic Management Plan
PCS	Power Conversion Systems
RED	Renewable Energy Development
THC	The Highland Council
TS	Transport Statement

Glossary of Terms

Term	Description
BESS Compound	Comprises the battery storage units, MV skids, two PCS units, MV transformer, low voltage cabinets and underground ducting and cabling.
Heavy Goods Vehicle	HGV refers to any vehicle with a Gross Weight over 3.5 tonnes. This is also used as a proxy for HGVs and buses/ coaches recognising the similar size and environmental characteristics of the respective vehicle types.
HIAB	A type of crane truck with modified chassis on which a crane is loaded, used for the transportation of construction materials.
Light Goods Vehicle	Commercial vehicle with a gross weight of 3,5kg or less, used to transport goods locally or in small quantities.
Light Vehicle	The term 'light vehicle' is used to describe the range of vehicles that would be used by construction employees, i.e. SUV, small vans, pick-ups, minibuses.
Planning Boundary	Total area within the redline boundary which includes all infrastructure components, visibility splays, access road and Spittal Convertor Station to ensure appropriate flexibility is provided for the point of connection
Preliminary Access Drawings	Proposed access arrangement drawings for information and not suitable for design purposes.
Proposed Development	Comprises a BESS with a capacity of up to 300 megawatts (MW) which will charge and discharge electricity from the adjacent Spittal 275 kV substation. It includes battery storage units arranged in rows, medium-voltage (MV) skids and ancillary low-voltage (LV) equipment, high-voltage (HV) grid transformers, air insulated switchgear; substation building comprising welfare facilities, a switch room and control room; an underground 275 kV grid connection cable; and site-wide supporting infrastructure including cabling, access tracks, fencing, attenuation basins and landscaping measures.
Substation Compound	Comprises 132/ 275 kV grid transformers, auxiliary transformers, LV distribution infrastructure, substation building, control room, HV switch room and welfare facilities.
The Monument	Remains of St Magnus' Church, burial ground and hospital (SM5413), situated on Spittal Mains farm in Caithness Highland region, approximately 75m south of the Proposed Development.
The Site	Refers to the agricultural fields on which the BESS and substation compound, temporary works compound, bund, cabling, new access road and junction would be located.
Vehicle trips	A two-way trip (i.e. the arrival and departure from site) for the transfer of goods or employees.

1 Introduction

1.1 Background

This Transport Statement (TS) with Outline Construction Traffic Management Plan (OCTMP) has been prepared by Royal HaskoningDHV on behalf of the applicant Field Spittal Ltd (Field). The TS relates to the construction and operation of a Battery Energy Storage System (BESS) with a capacity of up to 300 megawatts (MW) which will charge and discharge electricity from the adjacent Spittal 275 kV substation.

This TS is submitted as part of a planning application to the Scottish Government Energy Consents Unit (ECU) (Planning Ref. ECU00005116). The Highland Council (THC) is the local planning authority and highway authority for local roads, and Transport Scotland is the roads authority for trunk roads.

A scoping meeting was undertaken with Transport Scotland on 29th February 2024, where the scope of transport and highways matters associated with the planning application was defined. Minutes of this scoping meeting are located at **Appendix A**. This TS with OCTMP has been prepared in line with the discussions during this meeting.

Pre-application advice was provided by THC on 15th May 2024 (reference number. 24/00187/ PREMAJ) to Field for the Proposed Development. Comments relating to construction traffic impacts and access arrangements were considered when preparing this TS (with OCTMP), including provision of routes for construction access, baseline traffic flows on the A9, development related traffic flows and cumulative impact of construction traffic with other developments in the wider local area.

This TS has been prepared in line with the principles of local policy and provides a high-level assessment of the quantum of anticipated traffic associated with the Proposed Development. The OCTMP included within the TS considers measures to mitigate construction traffic impacts. This TS should be read in conjunction with other supporting documents submitted as part of the planning application.

1.2 Report Scope

Following this introductory section, the structure of the TS with OCTMP is as follows:

- Section 2 outlines relevant policy;
- Section 3 provides details of the location of the Proposed Development, and provides a description of the surrounding highway network and details of accessibility by all modes of travel;
- Section 4 details the Proposed Development including vehicular and servicing access arrangements; an active and sustainable travel strategy, and a car and cycle parking strategy for construction and operational vehicles;
- Section 5 provides details of the forecast traffic generation during construction and operational stages of the Proposed Development;
- Section 6 summarises developments in the wider local area which potentially have a cumulative impact on the Proposed Development;
- Section 7 provides an OCTMP which comprises the proposed Heavy Goods Vehicle (HGV) haulage routes, construction phase delivery schedule, management plan and mitigation measures; and
- Section 8 summarises and concludes the report.

2 National and Local Policy

2.1 Transport Scotland: Development Management Guidance (2012)

Transport Scotland is responsible for the trunk road network in Scotland. The 2012 Development Management Guidance document sets out the policy requirements for developments near trunk roads.

Paragraph 1.3 states "*Scottish Planning Policy identifies that a development should mitigate its impact where it would have a detrimental effect on existing levels of service*", and Paragraph 1.4 states that where the trunk road provides the only road access to the new development then "*care is needed to ensure a balance is struck between local and wider interest when assessing proposals*".

Paragraph 1.6 states that consultation with Transport Scotland is required where a development is likely to increase the volume of traffic or type of traffic entering or leaving a trunk road that require changes to layout or altering access to trunk roads and Paragraph 1.7 states that developers should "*give early notice about planned developments near trunk roads. This helps determine their potential impact on the trunk road network*".

Section 2 of the guidance sets out the consultation process. To enable the assessment of the impact of new developments of trunk roads, Transport Scotland will have regard for:

- Road Safety;
- Operation;
- Design standards, and
- Transport and traffic impact.

Paragraphs 2.4 and 2.5 state that to facilitate a more efficient determination process, Transport Scotland requires consultation to:

- better understand the new development;
- to initially indicate the acceptability of proposals;
- provide the opportunity to highlight any relevant issues which may affect proposals; and
- discuss the likely requirements for mitigating transport, traffic and safety effects.

Paragraph 2.10 states that "*Applications may also be considered as 'Major' where a change to the layout or alteration to the access to a trunk road is proposed. When major applications are put forward, they are required to be submitted with a Transportation Assessment (TA) and additional factors may need to be considered.*"

Section 3 of this guidance considers several "additional factors", including Cumulative Assessment. Paragraph 3.1 states that "*Where it is evident that a number of development proposals are to be promoted and may impact on the trunk road network at a specific junction or length of road, in the case of phased or multiple development, Transport Scotland will require that an assessment of the cumulative impact of these proposals is undertaken. This will identify the impact and appropriate mitigation required on an area-wide basis…Appropriate mitigation will be determined and thresholds established for development through the use of appropriate conditions*".

The Development Management Guidance refers to the Scottish Planning Policy (SPP) which states that "*new junctions on the motorway and trunk road network are not normally acceptable*". In all cases Transport

Scotland seeks to minimise the number of junctions and accesses onto the trunk road network and promote the use of existing points of access wherever practical.

Paragraph 3.4 states that "*Transport Scotland recognises, however, that in certain locations the trunk road will be the only means of access to development and in these cases consideration will be given to the new access subject to acceptable design criteria as well as justification and need…The scope of this justification will clearly be related to the location and scale of development*".

Development proposals that have the potential to affect the performance or safety of strategic transport networks need to be fully appraised to determine their impact. Paragraph 3.5 states that "*development proposals that have the potential to affect the performance or safety of strategic transport networks need to be fully appraised to determine their impact. Mitigation measures should be sought to achieve no net detriment to safety or in overall performance, including journey times and journey reliability; emissions; and accessibility*".

Paragraph 3.6 sets out the design standards required for trunk roads in line with the Design Manual for Roads and Bridges (DMRB), and Paragraph 3.7 states that "*drivers should be able to see any potential hazard in time to slow down or stop comfortably before reaching it. To ensure good lines of sight, junctions have to be designed with suitable visibility splays*".

This document also refers to site specific design issues including:

- Paragraph 3.12 states "*Consideration may have to be given to the effect of the access on the trunk road drainage systems*".
- Paragraph 3.13 states "*For many developments a boundary fence will have to be erected to prevent pedestrian access to the trunk road*".
- Paragraph 3.14 states "*Screening may be required*" to avoid dazzling drivers.
- Paragraph 3.15 states "*Vehicles making deliveries should be able to stop safely off the trunk road*".
- Paragraph 3.16 states "*Access onto the trunk road should always be made in a forward gear as this is the safest form of exit, and therefore a service bay or turning facilities within the site may be required*".
- Paragraph 3.17 states that "*Accesses should be surfaced in an approved bituminous material for at least the length of the longest vehicle expected to use it. This surfacing will have to be tied into the trunk road surfacing to an approved detail*".

Section 4 of the guidance sets out the determination process and construction stage. This section details the responses from Transport Scotland, performance target indicators, planning authority decision and agreements associated with the permission to work on trunk roads. Paragraph 4.13 indicates that "*infrastructure improvements required as part of the planning consent will meet or surpass the standards that are contained in DMRB*" and that the trunk road modification work will be subject to a road safety audit.

Monitoring of the implementation of consents and compliance with planning conditions is set out in Paragraph 4.14. and Paragraph 4.15 sets out the conditions for enforcement action by the planning authority.

The justification for a new access onto a trunk road is provided in Section 4 of this TS. The new access has been designed to address Transport Scotland's guidance.

2.2 Highland Council: Roads and Transport Guidelines for New Developments (May 2013)

This document sets out THC's overall transport requirements for new developments and sets out the requirement that prior to the construction of any new road, the developer should obtain both Planning Permission and Road Construction Consent (obtained with detailed planning permission).

Table 2.1 of the guidance provides a summary of the planning application supporting documentation required for inclusion in a Transport Statement. The elements of work required comprise:

- A site location plan;
- A site layout plan showing access arrangement (minimum scale 1:1,250);
- Access arrangement plans showing details of the access onto the public road including carriageway width, bell mouth radii and visibility splays;
- Details of proposed offsite mitigation including road widening and junction upgrades; and
- General arrangement layout plans of roads, bellmouth, turning heads, in-curtilage parking, service trips, cut and embankment slopes, and drainage.

Section 2.1.5.2 of the guidance sets out the main transport considerations to be addressed in the planning application. The main transportation considerations are associated with the accessibility to the site for all modes of travel, as well as the adequacy of the proposals including the impact of the development on the surrounding public roads. As such, THC would assess:

- the suitability of the access arrangements for all modes of travel to and within the development;
- the adequacy of the proposals in respect of all relevant modes of transport including the impact of the development on the surrounding public road network;
- the volume and type of vehicular traffic likely to be generated by the Proposed Development, together with its envisaged distribution and impact;
- the proposed access locations, with any restrictions on locations, junction types, sight distances and gradients;
- accessibility within the site for all relevant modes of transport;
- the layout design for new roads, including vertical profile and junction arrangements;
- the safety of the road network and any associated mitigation measures including Road Safety Audit Stage 1 or 2 Reports, as required by the Council;
- location of services, both overhead and underground; and
- flooding and drainage requirements.

Section 2.1.5.2 also considers transport matters external to the site, including the construction related issues of routing, timing, volume and size, and any problems or restrictions that may be anticipated and the known requirements of any other affected bodies in relation to transport issues.

Section 5.27.4 considers general construction traffic; where developments are likely to generate significant levels of construction traffic, THC expects that these trips should be considered as part of the general design process. Sites which present access issues should be agreed with THC, such as the use of haul roads and Temporary Traffic Regulation Orders. In such circumstances, THC expects that the developer should seek to mitigate the impact of the construction traffic.

The guidance indicates that a Transport Assessment (TA) is required for developments which have potentially significant impacts, and a TS is required for developments with a low impact. It is anticipated that the Proposed Development would have a low impact and as such a TS incorporating an OCTMP has been produced to primarily consider the transport implications of the construction phase of the Proposed Development. In line with THC: Roads and Transport guidance, this TS considers all transport elements set out in Table 2.1 and addresses the main transportation considerations including cumulative impacts, as set out in section 2.1.5.2.

It is anticipated that the highest level of traffic associated with the Proposed Development would be during the construction phase, and that operational trips would be negligible over the life span of the development. Given the low volumes of traffic associated with the operational phase, it is not anticipated that operational traffic would be in excess of daily traffic variation on the local road network and, as such, would have no significant impact. For this reason, the operational traffic has been scoped out of the assessment.

Activities and vehicle movements required during the decommissioning phase are unknown at the time of writing and therefore have not been considered as part of this assessment. It is likely that vehicle movements during decommissioning would be equal or less than the construction phase, and a phase specific Traffic Management Plan will be compiled and submitted to THC prior to decommissioning taking place.

2.3 Highland-Wide Local Development Plan (April 2012)

The Local Development Plan (LDP) sets out a vision statement and spatial strategy for THC area, ensuring that development is "*directed to places with sufficient existing or planned infrastructure and facilities to support sustainable developments*".

Chapter 22 'Sustainable Development and Climate Change' notes that "*The Highland area has great potential for renewable energy production and to contribute towards meeting ambitious targets set internationally, nationally and regionally*". The LDP acknowledges that *"additional electricity transmission and distribution infrastructure will need to be developed in Highland in order to realise the region's potential contribution to renewable electricity generation, contributing to national requirements and in order to serve local needs*".

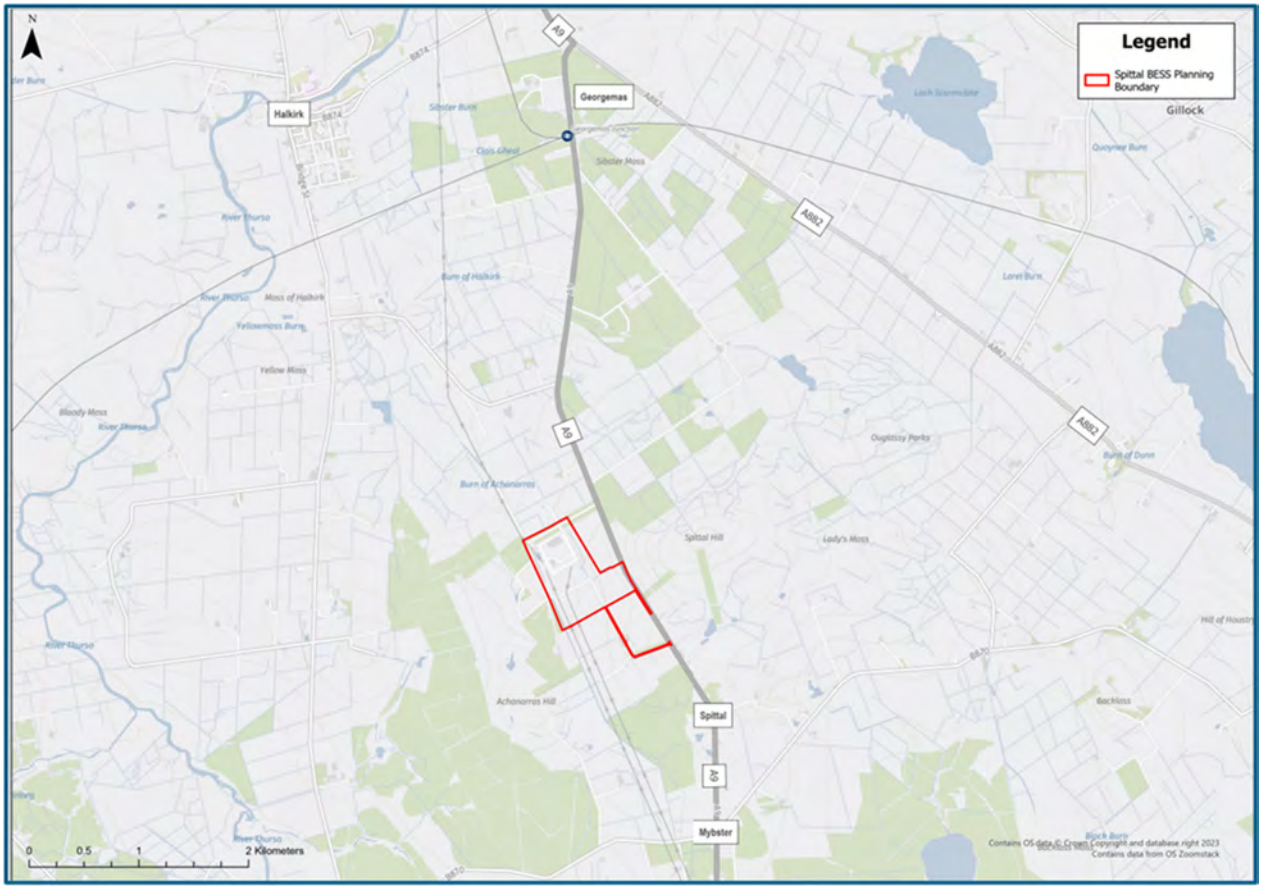
The Proposed Development would facilitate this potential for renewable energy production in the Highland area, which would have benefits in tackling climate change and increasing Scotland's energy security. This TS has been produced to ensure the transport impacts of the construction phase of the Proposed Development are minimised through appropriate mitigation measures.

3 Existing Situation

3.1 Site Location

The site of the Proposed Development is located west of the A9 trunk road and approximately 1.5 kilometres (km) northwest of the village of Spittal in Caithness, Scotland. A site location plan, indicating the planning boundary within the wider local context and local road network is provided in **Figure 3.1**.

Figure 3.1: Site Location in Wider Local Context



3.2 Existing Site Access

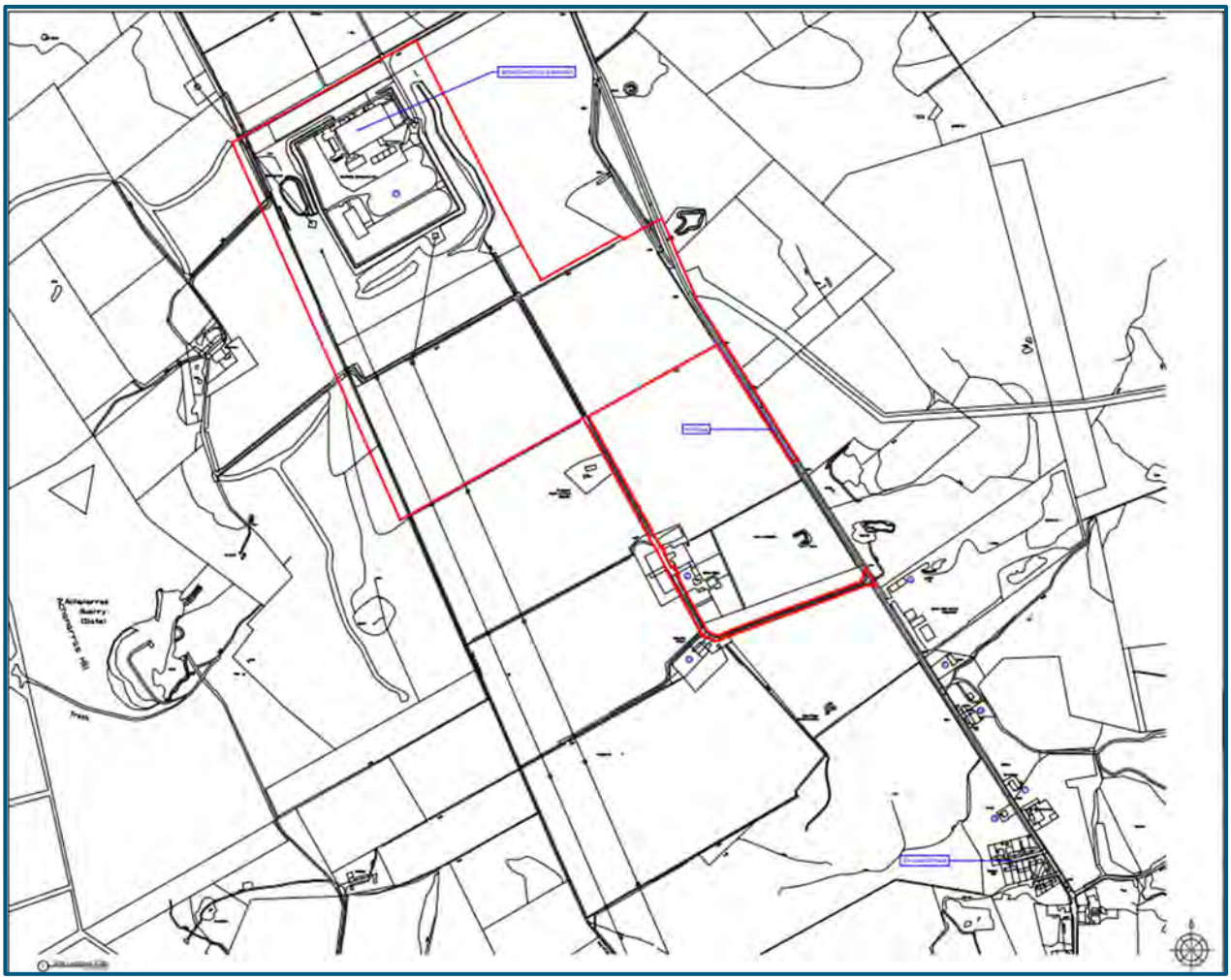
There are two existing vehicular access routes providing access to the site.

The existing vehicle access from the south is via a private farm track which extends from the A9 through Spittal Mains Farm. This private farm track is approximately 880 m in length and passes to the south and west of the Spittal Mains Farmhouse and to the east of the remains of St Magnus' church, burial ground and hospital (SM5413). The remains are hereby known as 'the monument' which has historical significance and is situated on the Spittal Mains Farm. This private farm track extends north and northwest through the site. The client has right of access along this farm track.

North of the site, an access road associated with the SSEN Spittal 275 kV substation extends from the A9, along the northern side of the substation, south of a woodland and through a farm associated with Far North Fencing. The client does not have the right of access over this access road and track.

To the northwest of the site, the access track from the north associated with the SSEN Spittal 275 kV substation links with the Spittal Mains Farm access track from the south. The site location plan, indicating the planning boundary is located at **Figure 3.2**.

Figure 3.2: Site Location Plan Indicating Planning Boundary



Source: Field Site Location Plan Drawing No 0002.1 (21.10.24)

To the east of the site, the A9 is a two-way single carriageway trunk road subject to 60 mph speed limit. To the north, the A9 provides access to the Georgemas Junction Railway station (4 km from the site), and links with the A882 (5 km from the site) to provide access to the settlements of Clayock, Dunn and Oldhall to the southeast. To the north of the A882 junction, the A9 extends a further 10 km to provide access to the town of Thurso and link with the A836.

To the south, the A9 provides access to the towns of Spittal, Mybster and Latheron. In the town of Latheron, approximately 23 km to the south of the site, the A9 links with the A99. From Latheron, the A99 extends approximately 53 km to the northeast to provide access to the towns of Wick and John O' Groats. To the southwest of Latheron, the A9 extends approximately 140 km to link with the A82 and A96 in the town of Inverness.

3.3 Baseline Traffic Conditions

In order to understand baseline traffic conditions and provide an overview of the operation of the existing highway in the vicinity of the Proposed Development, an Automatic Traffic Count (ATC) survey was

undertaken on the A9 in the vicinity of the proposed new access junction. An ATC was installed on Sunday 27th October 2024, aiming to collect data over seven consecutive days until Saturday 2nd November 2024.

During the survey period, the ATC was vandalised and as a result traffic flow data was not recorded after 09:00 on Thursday 31st October 2024. The output data recorded during the survey period (from 16:00 on Sunday 27th October 2024 to 09:00 on Thursday 31st October 2024) is summarised in **Table 3.1**. This data is utilised to calculate the baseline traffic flows in the vicinity of the site and comprise the average daily total vehicles and Heavy Goods Vehicles (HGVs) during the network AM peak (08:00 – 09:00) and PM peak (17:00 – 18:00) periods.

Table 3.1: Summary of ATC on A9 for Recorded Weekday Period (Monday – Wednesday)

Direction of Travel	Total Number of Vehicles Recorded	Average Weekday Vehicle Flow (HGVs)		
		Total Vehicles	AM Peak (08:00 – 09:00)	PM Peak (17:00 – 18:00)
Northbound	2,480	827 (73)	44 (3)	81 (5)
Southbound	2,435	812 (88)	87 (5)	39(4)
Two-Way	4,915	1,639 (161)	131(8)	120 (9)

The ATC results indicate that over the complete weekdays during the survey period (Monday – Wednesday) a total of 4,915 two-way vehicles were recorded on the A9 in the vicinity of the proposed new access: 2,480 vehicles travelled northbound towards Thurso and 2,435 vehicles travelled southbound towards the settlement of Spittal. A total daily average of 1,639 two-way vehicles were recorded: an average of 827 vehicles travelled northbound past the site and an average of 812 vehicles travelled southbound past the site. An average daily total of 161 HGV two-way trips were recorded: 73 travelled northbound and 88 travelled southbound.

During the network AM Peak (08:00 -09:00) an average daily total of 131 two-way trips were recorded: 44 vehicles travelled northbound, and 87 vehicles travelled southbound past the site. An average daily total of eight HGV trips were recorded: three HGVs travelled northbound, and five HGVs travelled southbound past the site in the AM peak period.

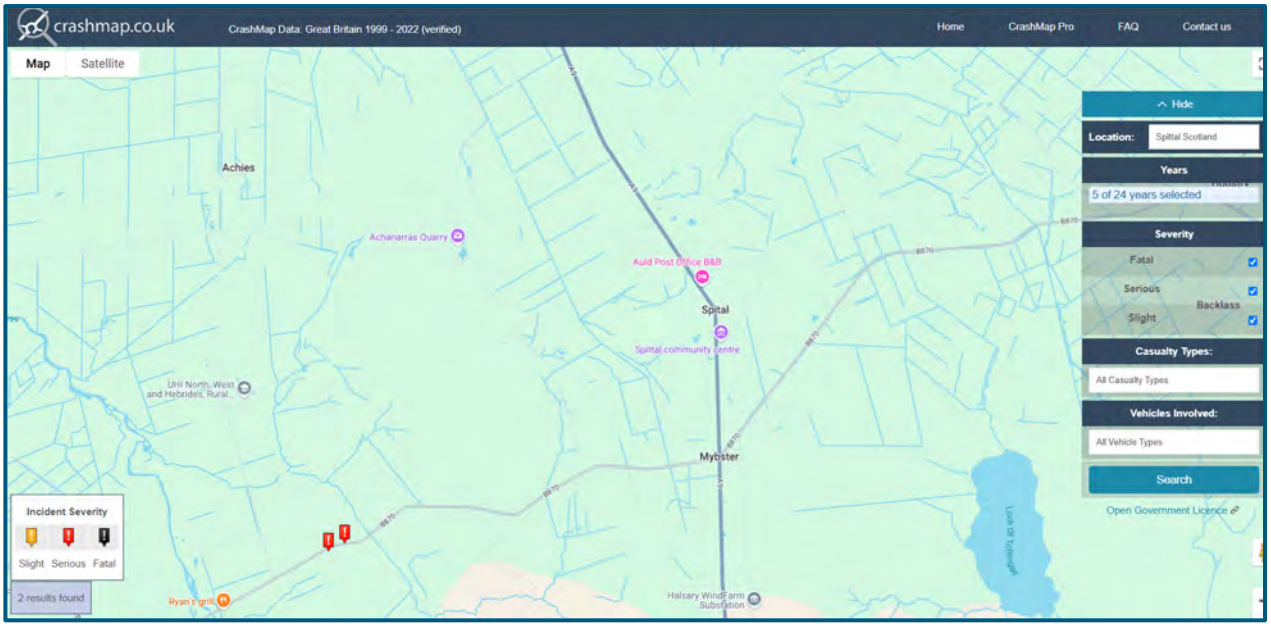
During the network PM Peak (17:00 – 18:00) an average daily total of 120 two-way trips were recorded: 81 vehicles travelled northbound, and 39 vehicles travelled southbound past the site. An average daily total of nine HGV trips were recorded: five travelled northbound and four travelled southbound past the site in the PM peak period.

The results of the baseline traffic data recorded on the A9 in the vicinity of the site indicates low levels of two-way traffic. Previous DMRB guidance (TA 79/99, 1999) provided estimates of highway link capacity based on the type of road and existing carriageway width. Whilst the guidance primarily related to urban roads, it gives an indication of the likely capacity of rural roads of a similar nature. For a 6.1 m high standard road with limited accesses, a capacity of 1,020 vehicles per hour is expected in the busiest direction. This would suggest that based on the surveyed traffic conditions, the A9 is operating at less than 10% of forecast maximum link capacity.

3.4 Personal Injury Collisions

A review of Personal Injury Collisions (PICs) using CrashMap for all vehicle trips over the latest five-year period (2018 – 2022) revealed that no PICs were recorded on the A9 in the vicinity of the site. Two PICs were recorded on the B870 approximately 5 km south of the Proposed Development. The location of these PICs is indicated in **Figure 3.3**.

Figure 3.3: Personal Injury Collisions Located in the Vicinity of the Proposed Development



Source: https://www.crashmap.co.uk/

Given the distance of the PICs on the B870 from the Proposed Development, as well as the absence of causal factors which resulted in the PICs, no analysis has been undertaken. As a result of the low number of PICs on the wider road network, it is unlikely that existing road safety concerns would be exacerbated by the proposed construction or operational traffic at the site.

3.5 Site Visits

Site visits were undertaken by Field and Royal HaskoningDHV in February and March 2024. These site visits provided opportunity to understand conditions on the local road network and to take photographs of local access roads and key junctions in the vicinity of the site.

4 Proposals

4.1 Proposed Development

The Proposed Development principally comprises a BESS with a capacity of up to 300 megawatts (MW) which will charge and discharge electricity from the adjacent Spittal 275 kV substation. It includes:

- Battery storage units arranged in rows;
- Medium-voltage (MV) skids and ancillary low-voltage (LV) equipment;
- High-voltage (HV) grid transformers;
- Air insulated switchgear;
- A substation building comprising welfare facilities, a switch room and control room;
- An underground 275 kV grid connection cable; and
- Site-wide supporting infrastructure including cabling, access tracks, fencing, attenuation basins and landscaping measures.

The Proposed Development's overall planning boundary (48.58 ha) is larger than the anticipated development footprint (approximately 9.51 ha). The primary reason for this has been to incorporate the entire existing Spittal 275 kV substation site into the planning boundary to ensure appropriate flexibility is provided for the point of connection. The planning boundary also includes an existing farm access track, a field to the east which accommodates bunding, and a new access road and junction with the A9.

4.2 Existing Vehicle Access Routes

The feasibility of using the two existing access roads set out in **Section 0** was explored. The review of these existing access routes indicated that:

- The existing vehicular access track associated with the SSEN Spittal substation located to the north of the Proposed Development is a private track owned and maintained by SHE Transmission plc. This track is unsuitable to provide access to the Proposed Development due a number of factors including:
  - the applicant does not have right of access over this private track;
  - the possibility of entering into a shared access agreement was refused by SHE Transmission plc; and
  - the geometry, gradient and quantum of bends located along this track to the south and west of the SSEN Spittal substation are unsuitable for HGVs.
- The existing vehicular access track extends through Spittal Mains Farm to the southeast of the site. This private track extends from the Spittal Mains Farm access off the A9, passing a scheduled monument located to the south of the Proposed Development. This track is unsuitable to provide access to the Proposed Development due to a number of factors including:
  - the constrained nature of the route through this private farm track which is unsuitable for large volumes of construction traffic, particularly Abnormal Indivisible Loads (AILs);
  - increased disruption to several Spittal Mains farmhouses that exist along the farm track; and
  - potential impacts of HGV traffic on the scheduled monument arising from regular use of the existing farm track during construction.

4.3 Vehicle Access Requirements

Vehicles requiring access during the construction phase are detailed in **Table 5.1** and include:

- Staff transport, either cars or light vehicles;
- 350T crane;
- Construction plant such as excavators and tipper trucks for the delivery of stone and building materials;
- Low loader; and
- AIL for the delivery of the HV grid transformers.

During the operational phase, it is anticipated that small vans and cars associated with maintenance would require access to the Proposed Development on a semi-regular basis (approximately once per month). In the unlikely event that a transformer would require replacement, an AIL would require access to the substation compound of the Proposed Development.

4.4 Proposed Site Access Junction and Access Road

Due to the constrained nature of the existing access tracks, a new access junction and access road are sought from the A9 to the Proposed Development. Construction vehicles would temporarily utilise the private Spittal Mains Farm track to construct the new access junction and access road; following completion, all construction and operational vehicles would utilise the new access arrangements.

The new access road and junction on the A9 would be constructed as early as possible in the construction programme. The highest volume of traffic and the largest vehicles requiring access to the Proposed Development would be associated with the construction phase. As such, the access road and junction with the A9 have been designed to accommodate a maximum legal length articulated HGV 16.48 m in length, as the largest vehicles requiring access during the construction phase for the delivery of battery storage units and associated electrical equipment. The new access junction allows for two-way HGV movement at the junction. Preliminary access design drawings are located at **Appendix B.**

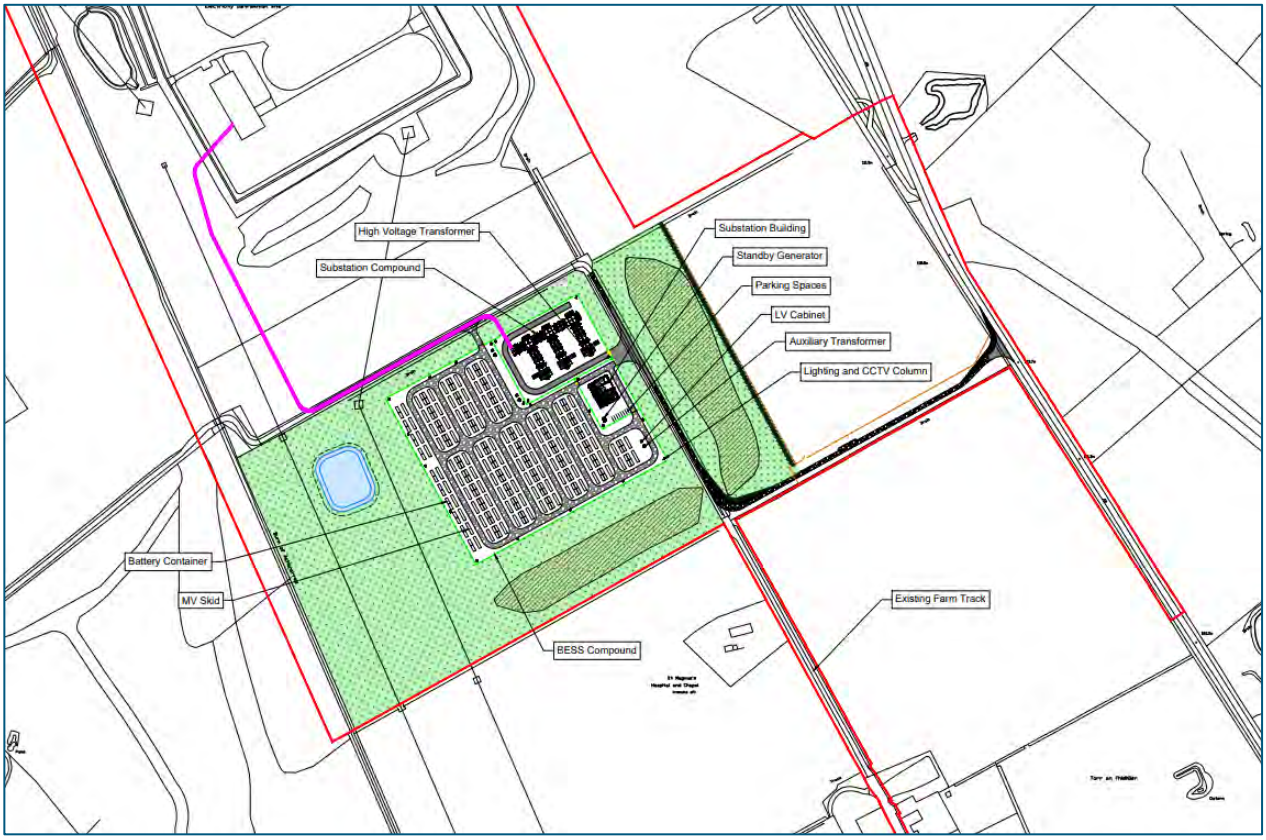
The proposed new access junction with the A9 comprises a gated access, a wide bell mouth and hard standing set back 18.75 m from the edge of the A9 carriageway. The hardstanding aims to reduce the amount of sand, gravel and mud transferring from the site access road onto the A9, in accordance with Transport Scotland requirements. The hardstanding would be installed with a gradient less than 10%. The gate would be located to ensure the largest vehicle routinely using the site (16.48 m maximum legal length articulated HGV) could wait on the access without obstructing the A9.

In the vicinity of the proposed new access junction, the A9 is subject to 60 mph speed limit. Drawings located at **Appendix C** indicated that the required visibility of 2.4 m x 215 m, in line with DMRB, can be achieved in both directions on the A9 on land within the public highway or over which Field has right of access.

Details of service and delivery vehicles which would require access to the site on a regular basis was provided by Field and set out in **Table 5.1** of this TS. Swept path analysis has been undertaken for the largest vehicles likely to require access to the site and include a fire tender 8.68 m in length, a rigid HGV 12 m in length and a legal maximum length articulated vehicle 16.48 m in length. Key manoeuvres relevant to the proposed access junction and access road were undertaken. The relevant swept path analysis drawings, located at **Appendix D,** indicate that the largest vehicles requiring access to the site on a regular basis during the construction phase, can be safely accommodated entering and exiting the site in forward gear.

The proposed access road is approximately 300 m in length and 4 m in width with intervisible passing place, and would extend from the A9 junction southwest to link with the existing private farm track. The proposal includes widening and improvement works to this existing track north of the new access road to accommodate deliveries, emergency vehicles and construction vehicles. The upgraded farm track will provide a primary gated access point located at the eastern side of the BESS and substation compounds. A secondary access is located to the north of the BESS compound, for emergency vehicles only. Both points of access link with the internal road network which comprises a circuitous single-lane access track through the BESS and substation compounds, as indicated in the site layout plan and access arrangements in **Figure 4.1**.

Figure 4.1: Site Layout Plan



Source: Field Indicative Site Layout Plan 001.1.REV 11 (17.12.24)

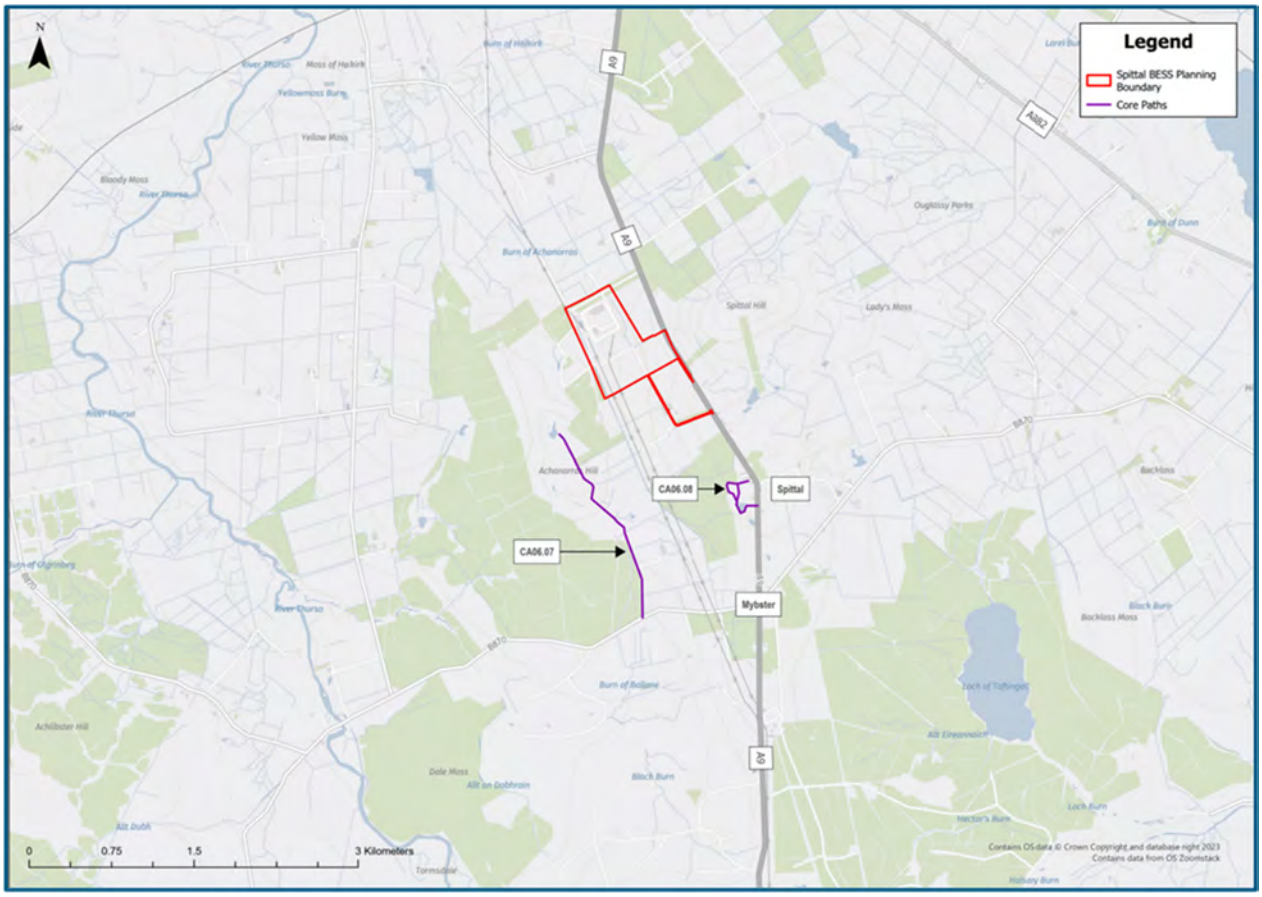
The construction phase is estimated to extend over a 24-month period, and details of the final phasing of the construction period would be provided prior to commencement.

During the operational phase, the new access junction and access road would serve all vehicles requiring access to the Proposed Development. It is anticipated that small vans and LVs would be associated with maintenance during the operational phase on an approximately monthly basis, and access arrangements associated with AIL deliveries would be on a temporary basis, in line with works undertaken during the construction phase.

4.5 Walking, Cycling and Public Transport Strategy

A review of THC Core Path maps[1] indicates that Core Path CA06.07 extends from the Achanarras Quarry to the B870, approximately 1 km to the west of the site. The Core Path CA06.08 is a circular path linking to the A9, south of the settlement of Spittal approximately 1.5 km to the southeast of the site. The Core Paths located in the vicinity of the Proposed Development are indicated in **Figure 4.2**.

Figure 4.2: Location of Core Paths in the Vicinity of the Proposed Development



Given the location of the core paths, construction and delivery vehicles accessing the Proposed Development would not impact users of these paths.

Due to the remote rural location of the site, and the access off a trunk road, it is not anticipated that pedestrians would access the site. It is also not anticipated that cyclists would access the site on a regular basis. Should cyclists require access to the site, access would be available via the new access junction and access road off the A9.

The closest railway station to the site is located at Georgemas, approximately 4.2 kms to the north of the site. In the absence of pedestrian provision on the A9, and given the distance to the site, it is unlikely that the Proposed Development would be accessed by public transport.

[1] https://highland.maps.arcgis.com/apps/webappviewer/index.html?id=2fd3fc9c72d545f7bcf1b43bf5c8445f

4.6 Parking Strategy

Car parking spaces would be located within the substation compound to provide efficient access to welfare facilities. During the construction phase, visitors will be directed to designated car parking located in the vicinity of the substation building which contains welfare facilities. Operational staff will park across the site, as appropriate. Secure staff cycle parking would be accommodated within the welfare facilities, as required. Due to the infrequent operational trips to the site, limited car and cycle parking will be required during the operational phase.

5 Traffic Generation

5.1 Construction Traffic Demand

It is anticipated that the highest level of traffic would be generated during the construction phase. The construction phase of the Proposed Development would occur over a 24-month period:

- Year 1
  - Site establishment;
  - Groundworks associated with site clearance and preparation;
  - Main civils work including stone for site access road and BESS compound platform;
  - BESS equipment deliveries and installation; and
  - Substation compound foundations
- Year 2
  - BESS equipment deliveries and installation;
  - Substation compound foundations;
  - Electrical installation and underground cabling;
  - Commissioning, testing and acceptance;
  - Demobilisation; and
  - Landscaping.

The quantum of anticipated deliveries associated with the construction phase has been derived from information provided by Field, as well as material quantities set out on the Site Finish Levels Plan located in **Appendix E**. Assumptions which inform the TS are based on construction traffic and operations from similar sites. A final construction programme which accurately reflects the schedule of deliveries associated with the construction phase would be derived prior to the commencement of activities at the site and included in a final CTMP.

The typical operational hours of the site during the 24-month construction phase would be 07:00 – 19:00 Monday to Friday and 07:00 – 13:00 on Saturdays.

During the construction phase, HGV traffic on weekdays would peak at a maximum of four HGVs per hour for stone deliveries, which equates to eight two-way trips per hour, and a daily total of 48 HGV deliveries (96 two-way trips) per weekday. HGV traffic on Saturdays would peak at a maximum of 24 two-way trips. Deliveries of stone would typically be undertaken using 10 m long, eight-wheeled tipper trucks. Stone deliveries are expected to peak in weeks 21 to 24, associated with the internal access roads and BESS and substation platforms.

It is anticipated that towards the end of Year 1/ early Year 2, following the completion of the stone platforms, maximum length articulated HGVs would deliver the batteries to the BESS compound. Battery construction information has been provided by Field. The Proposed Development has been designed to accommodate a range of battery systems from different suppliers who will be selected against a performance specification in a final procurement activity prior to commencement of work. The site layout plan **Figure 4.1** indicates a total of 196 battery units arranged in rows would be located on the BESS compound.

It is anticipated that small volumes of material from the earthworks would be removed from the BESS and substation compounds, with the majority of material being utilised for on-site fill and landscaping bunds. The estimated traffic associated with the construction period was provided by Field and is set out in **Table 5.1**.

Table 5.1: Estimated Trip Generation During the Construction Phase (Years 1 and 2)

Phase	Task	Vehicle Type	Total Trips	Two-Way Vehicle Trips	Programme/ Duration
Site Establishment	Upgrade private farm access road and construction of new site access junction and road	Low Loader	4	4	Weeks 1 – 2
		10m^3 Rigid Tipper Truck	180	360	Weeks 1 – 6
	Compound earthworks	10m^3 rigid tipper truck	276	552	Weeks 7 - 20
	Site office at BESS and substation compound	Maximum legal length articulated HGV	14	28	Weeks 7 – 20
	Equipment and furniture for site office	Small van deliveries	4	8	Weeks 7 – 20
Main construction BESS compound: Groundworks, civil works associated with access junction and access road and platforms	Removal of material (largely topsoil) BESS and substation compound	10m^3 Rigid Tipper Truck (vehicles already on site)	4	8	Week 7 – 20
	Stone deliveries associated with internal access roads	10m^3 Rigid Tipper Truck	308	616	Weeks 21 – 24
	Stone deliveries for BESS and substation compound (to formation level)	10m^3 Rigid Tipper Truck	730	1460	Weeks 21 – 24
	Reinforcement and formwork for foundations (BESS compound)	Maximum legal length articulated HGV	20	40	Weeks 25 – 36
	Reinforcement and formwork for foundations (275kV compound)	Maximum legal length articulated HGV	10	20	Weeks 43 – 54
	Concrete for equipment foundations (BESS compound)	8m^3 concrete mixer	521	1,042	Weeks 25 – 36
	Concrete for equipment foundations (275kV compound)	8m^3 concrete mixer	130	260	Weeks 43 – 54
	Crane delivery	350T mobile crane	2	4	Weeks 43 - 60
	Delivery of battery and storage units (BESS compound)	Maximum legal length articulated HGV/ Low loader	196	392	Weeks 43 – 60

Phase	Task	Vehicle Type	Total Trips	Two-Way Vehicle Trips	Programme/ Duration
	Delivery of MV skids	Maximum legal length articulated HGV	98	196	Weeks 43 – 60
	Delivery of standby generator	Maximum legal length articulated HGV	1	2	Weeks 73 – 74
	Delivery of grid transformers (including radiators and tank)	AIL	3	6	Weeks 57 – 58
		Maximum legal length articulated HGV	3	6	Weeks 57 – 58
	Delivery of materials for substation building	Maximum legal length articulated HGV	60	120	Weeks 55 – 58
	Delivery of substation compound equipment	Maximum legal length articulated HGV	8	16	Weeks 71 – 74
	Delivery of auxiliary transformer and LV cabinets	Maximum legal length articulated HGV	2	4	Weeks 59 – 60
	Delivery of lighting and CCTV columns	Maximum legal length articulated HGV	3	6	Weeks 65 – 66
	Delivery of finish stone	$10m^3$ Rigid Tipper Truck	86	172	Weeks 75 – 76
	Delivery of fencing	Maximum legal length articulated HGV	10	20	Weeks 65 – 68
Electrical installations	Construction of cable trenches (sand, ducting, tape etc)	Maximum legal length articulated HGV and $10m^3$ Rigid Tipper Truck	65	130	Weeks 33 – 42
	Electrical installations and cabling	Maximum legal length articulated HGV	5	10	Week 61 – 78
Commissioning, testing and acceptance	Testing	Small van and private cars	10	20	Week 77 – 104
Demobilisation	Removal of equipment from site	Maximum legal length articulated HGV	300	600	Week 90 – 104
Landscaping	Deliveries	Small delivery van	10	20	Week 90– 104

Phase	Task	Vehicle Type	Total Trips	Two-Way Vehicle Trips	Programme/ Duration
Total Estimated Trips During Construction Phase			3,063	6,126	

A total of 3,063 HGVs and 6,126 two-way HGV trips are estimated to be associated with the construction of the Proposed Development over a 24-month period. Over the two-year construction programme there would be an average of 5 – 6 deliveries per day.

AILs associated with the delivery of the transformers are anticipated during Year 1 of the construction phase. It is anticipated that requirements relating to the transportation and delivery of AILs would be addressed through a specific AIL-CTMP to be produced post-planning consent. The AIL report is located at **Appendix F**.

It is not anticipated that lining would be installed or removed during the construction phase of the new access to the scheme. Temporary road signs erected on the A9 will accord with the Traffic Signs Manual[2].

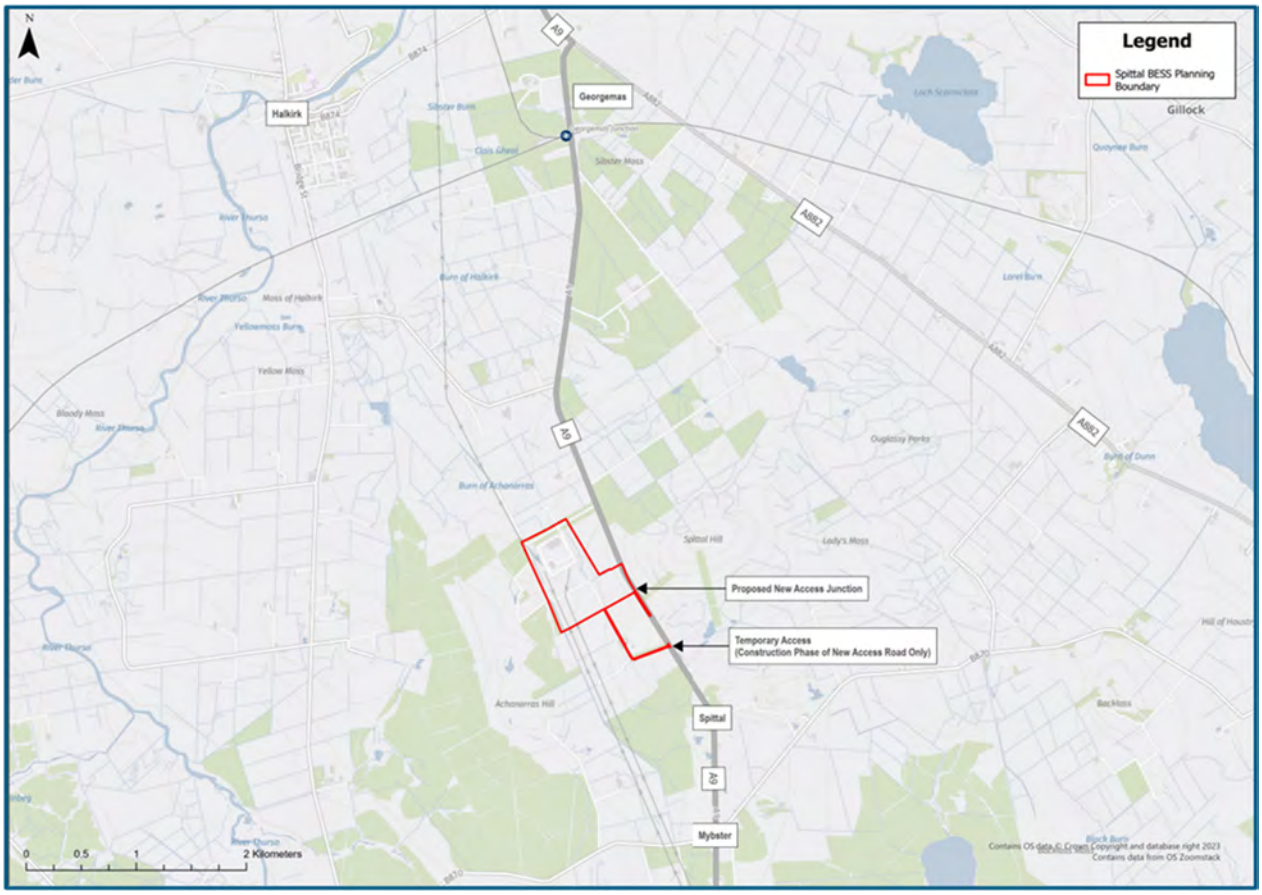
5.2 Construction Traffic Routing

The construction programme has been designed to prioritise construction of the new access junction with the A9 within the first six weeks. At this stage it is assumed that access will be required through the existing Spittal Mains Farm access to safely construct the junction. All construction traffic would use the new access junction once it is completed.

The temporary access through Spittal Mains Farm and the new access junction and access road are indicated in **Figure 5.1**.

[2] *Department for Transport: Traffic Signs Manual, Chapter 8 (2018)*

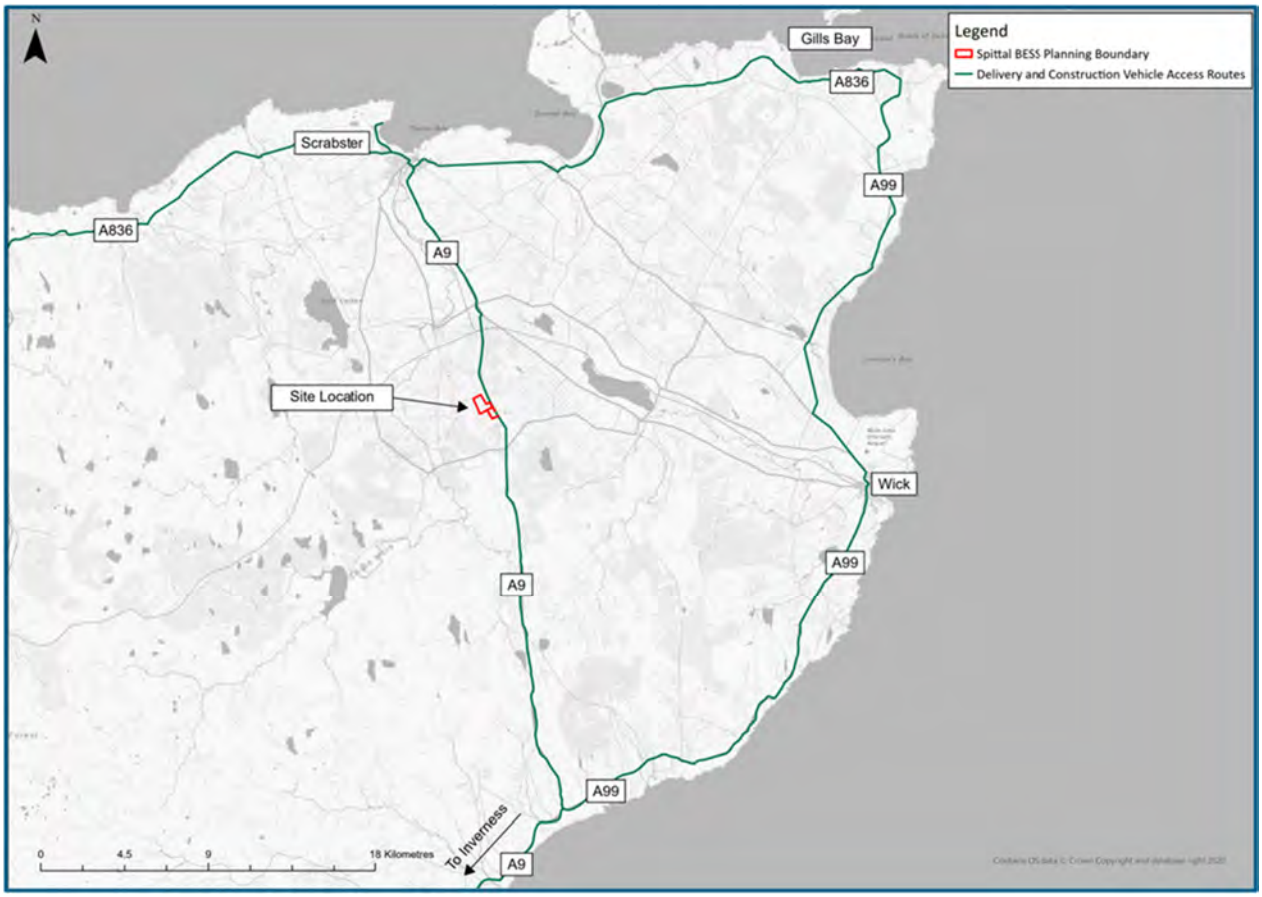
Figure 5.1: Proposed Temporary and Permanent Access Routes to the Proposed Development



The proposed delivery route to the site via the A9 was discussed during consultation with Transport Scotland. From the new access junction on the A9, it is anticipated that HGVs, construction and delivery vehicles associated with the Proposed Development would utilise the A9 to the north and south, and beyond the site the network of 'A' roads in the wider area.

Approximately 22 km to the south of the new access junction, the A9 links with A99 at Latheron. From Latheron the A99 extends 53 km to the north to John O' Groats, via Wick. At John O' Groats the A99 links with the A836 which extends westwards along the NC500 route, providing access to local ports located at Gills Bay and Scabster. Approximately 5 km to the north of the new access junction, the A9 links with A882 at Georgemas. From this junction, the A882 extends 23 km to the southeast via Watten, to link with the A99 at Wick. To the north of the A9/ A882 junction, the A9 extends approximately 10 km to Thurso, to link with the A836 which extends to the west and east, forming part of the NC500 route. As such, it is anticipated that vehicles requiring access to the Proposed Development during the construction phase would utilise the A9 and the network of 'A' roads in the wider local area, as indicated in **Figure 5.2**.

Figure 5.2: Heavy Goods Vehicle (HGV) Proposed Temporary and Permanent Access Routes to the Proposed Development



It is likely that Wick, located approximately 25 km to the southeast of the Proposed Development, could function as a key location for the transport of resources and materials by sea. As such, it is anticipated that the A99 between Wick and Latheron and then via the A9, or alternatively the A882 between Wick and Watten then via the A9 at Georgemas, would be utilised by HGVs. The final HGV routing would be confirmed in the final CTMP, subject to the appointment of a contractor and confirmation of suppliers.

5.3 Construction Traffic Impact

Comparison of the peak hourly construction flows of eight two-way HGVs per hour against observed traffic flows reveals limited impacts. In the busiest AM peak hour, eight additional vehicles to the 131 observed vehicles equates to a six percent impact. Notably link flows would remain below 10% of anticipated capacity in both directions.

5.4 Operational Traffic Demand

It is anticipated that operational traffic associated with the Proposed Development would be very low and as a result the impact of operational traffic on the local road network would be negligible. It is estimated that one Light Goods Vehicle (LGV) would require access to the site per month for routine checks and maintenance, and an occasional HGV would require access to replace batteries, as required.

During the operational phase, abnormal loads associated with the incidental removal and replacement of the transformers may be required during the life span of the scheme. Refurbishment and replacement of batteries will be limited to specific time periods as required, resulting in a small increase in the number of

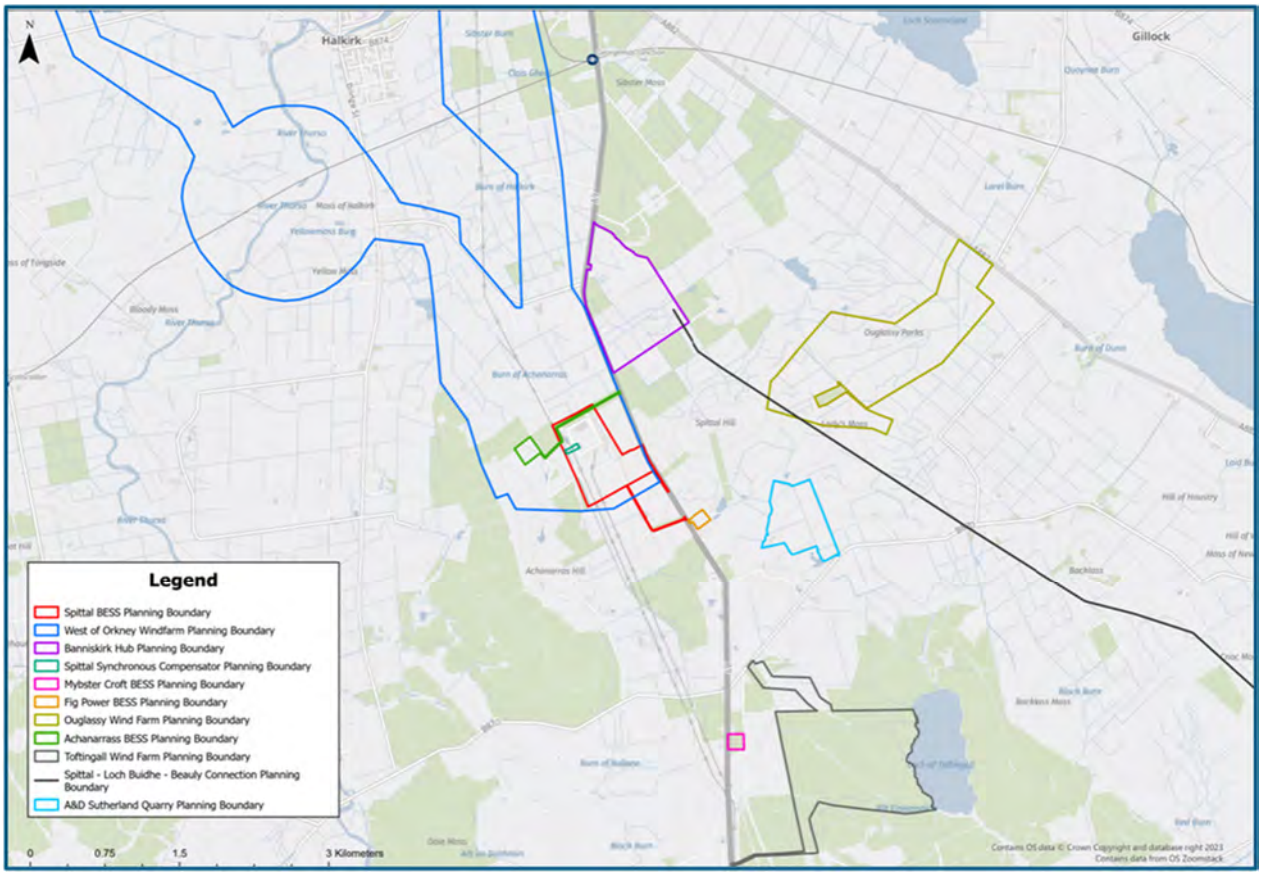
maintenance vehicles. In the highly unusual situation that works were required to the substation, an AIL could potentially be required to remove and replace the equipment.

It is reasonable to assume a slight increase in the number of HGV and HGV trips during the decommissioning stage, which would be managed with similar methods to construction of the site.

6 Cumulative Developments

There are 11 proposed developments located in the wider local area which have been identified with the potential to have a cumulative traffic impact when considered with the Proposed Development. These developments are located within 3 km of the Proposed Development, as indicated in **Figure 6.1**.

Figure 6.1: Location of Proposed Developments Associated with the Cumulative Impact of the Proposed Development



6.1 West of Orkney Wind Farm (Onshore Substation and Infrastructure)

Planning application (Ref. 23/05353/PIP) was granted permission in principle (dated 18/06/24) for the construction of onshore transmission infrastructure comprising up to two cable landfalls, an onshore substation and up to five associated export circuits. A subsequent application (Ref. 24/03205/PNO) relating to ground investigation work groundworks and permission is pending. At this stage no traffic data associated with this development was available online, and as such the cumulative impact of this consented scheme cannot be accurately assessed.

6.2 Ayre Offshore Wind Farm (Onshore Substation and Infrastructure)

An Environmental Impact Assessment (EIA) scoping request was submitted to Marine Scotland (Ref. 24/00243/SCOP) relating to Ayre Offshore Wind Farm onshore infrastructure including a substation, inter-array cables, export cables and associated infrastructure. The proposed development "*will be within 2km of the National Transmissions Operator SSEN substation point of connection*" and as such, would connect to SSE's new proposed Spittal 400kV substation, as summarised in **Section 6.3**.

THC's response to the scoping request (dated 28/02/24) sets out the EIA and planning requirements. The Transport Planning response (dated 08/02/24) indicated no objections to the development. At this stage, no

transport related documents have been submitted in relation to this scoping exercise, and as such the location of this proposed development and proposed cable route cannot be determined, and the cumulative impact of this consented scheme cannot be accurately assessed.

6.3 Banniskirk Hub (New Spittal Area 400 kV Substation and HVDC converter station)

An EIA Scoping Report (November 2023) was submitted to THC and relates to planning application (Ref. 23/05829/SCOP). This EIA Scoping Report relates to a new 400 kV substation and HVDC converter station located on land 360 m northeast of Achalone Cottage in Halkirk, and approximately 2 km north of the Proposed Development.

The proposal comprises the substation and converter station connection to the proposed new 400 kV overhead line between Spittal and Beauly, the new Spittal to Peterhead HVDC link and the existing Spittal 275/132kV substation. This proposed development is located approximately 2 km to the south of the Proposed Development, in the vicinity of the settlement of Spittal.

Paragraph 2.6 in the EIA states that "*The construction will give rise to regular numbers of staff transport movements, with small work crews travelling to the Site. It is anticipated that the Principal Contractor will identify the construction compound area, with a safe area for parking away from the public highway. Vehicle movements to the Site form the local highway network will be required to bring construction plant to the Site and deliver the foundations, building material and other infrastructure components to site*".

Chapter 7 of the EIA Scoping Report (November 2023)[3] sets out the transport related information. During the construction phase, three points of access to the development will be off the A9, with two points of access being retained post-construction to serve operational and maintenance vehicles accessing the development.

The construction programme associated with this proposed development is unknown. The impacts of the construction traffic have the potential to significantly impact nearby receptors, and as such traffic associated with the construction phase would be assessed in the Traffic and Transportation Chapter of the EIA. Subject to the confirmation of trip generation numbers, the final scope of the assessment including plans for baseline data collection, will be agreed with Transport Scotland and THC.

Operational traffic was scoped out of the EIA as the anticipated level of daily traffic associated with ongoing operations at the site was low (two or three light vehicle movements per day). As such, the impact of the operational traffic will be negligible, and no further assessment is required.

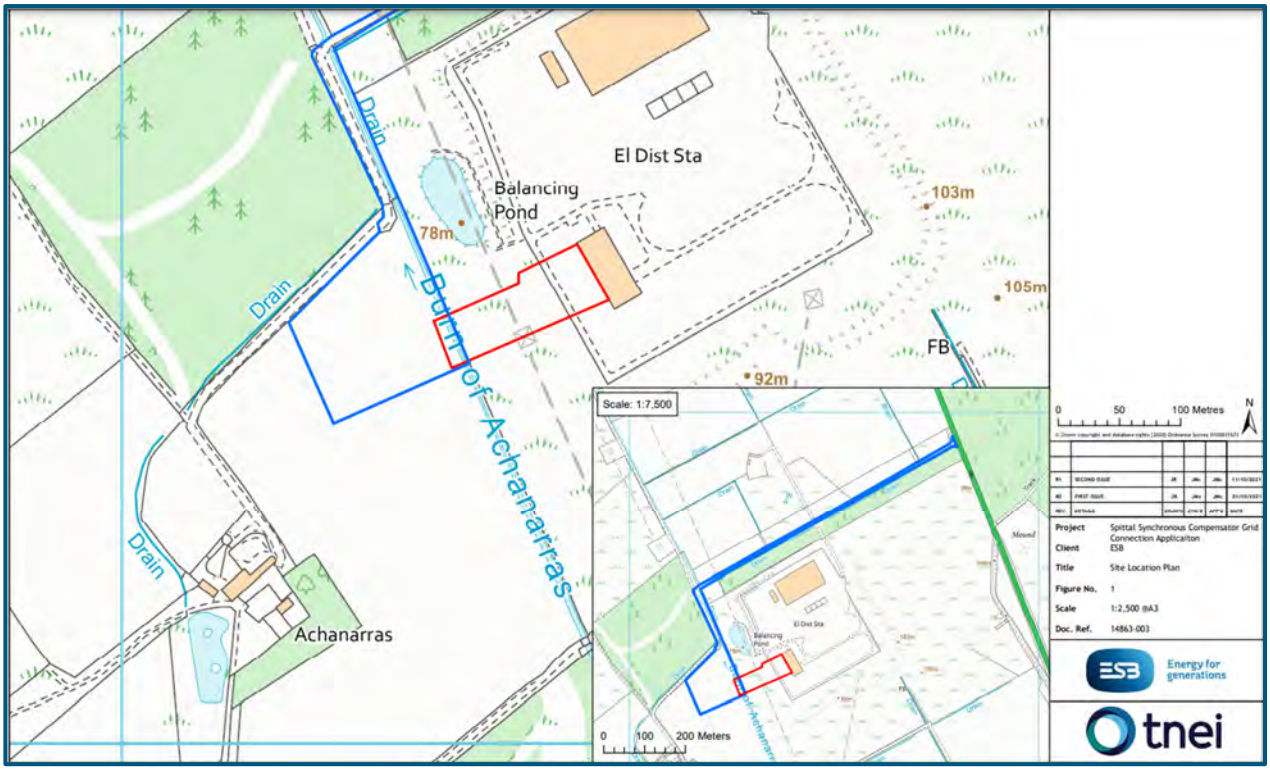
6.4 Synchronous Compensator Underground Cable Connection

Planning application (Ref. 22/00016/FUL) submitted to THC for the development comprising a HV underground grid connection for a proposed synchronous compensator, located on land 170 m southeast of Mybster Croft, Spittal, was granted planning permission on 03/03/22.

The site of this proposed development is located on the southwest side of the Spittal substation (as indicated in **Figure 6.2)** and as such, is located within the planning boundary of the Proposed Development to the northwest of the proposed BESS compound.

[3] *Scottish and Southern Electricity Networks: Spittal Substation and HVDC Converter Station Environmental Impact Assessment Scoping Request (November 2023)*

Figure 6.2: Location of Spittal Synchronous Compensator Grid Connection



Source: Otnei: Site Location Plan (Ref. 14863-003) 11.10.21

It is understood that this synchronous compensator is not progressing, and that planning permission lapses on 03/03/25. As such, the cumulative impact of this proposed development has not been assessed.

6.5 Mybster Croft BESS

A planning application (Ref. 23/05424/FUL) was submitted on 03/11/24 to THC for the erection and operation of a 47 MW capacity BESS facility, comprising containerised battery storage units, inverters, transformers, switch room, site access, landscaping, security fencing and ancillary infrastructure. The proposed development is located on land 170 m southeast of Mybster Croft in Spittal, approximately 3 km from the Proposed Development. This application is currently under consideration and at this stage there are no transport related documents available. As such, the cumulative impact of this scheme cannot be accurately assessed.

6.6 Fig Power – Spittal BESS

A planning application notice was submitted to THC (Ref. 24/01076/PAN). This proposed development comprises a 49.9 MW BESS located at Spittal, Caithness, KW1 5XR on land located to the east of the A9, approximately 700 m to the southeast of the new access junction to the Proposed Development. This development has proposed access off the A9. There are no transport related documents available. As such, the cumulative impact of this scheme cannot be accurately assessed.

6.7 Ouglassy Wind Farm

A scoping exercise (Ref. ECU00005046) was submitted to the ECU and to THC (Ref. 24/00902/SCOP). The proposed development comprises up to eight wind turbines, with blade tip height of up to 180 m, BESS technology, associated infrastructure and ancillary development. The proposed development is located at

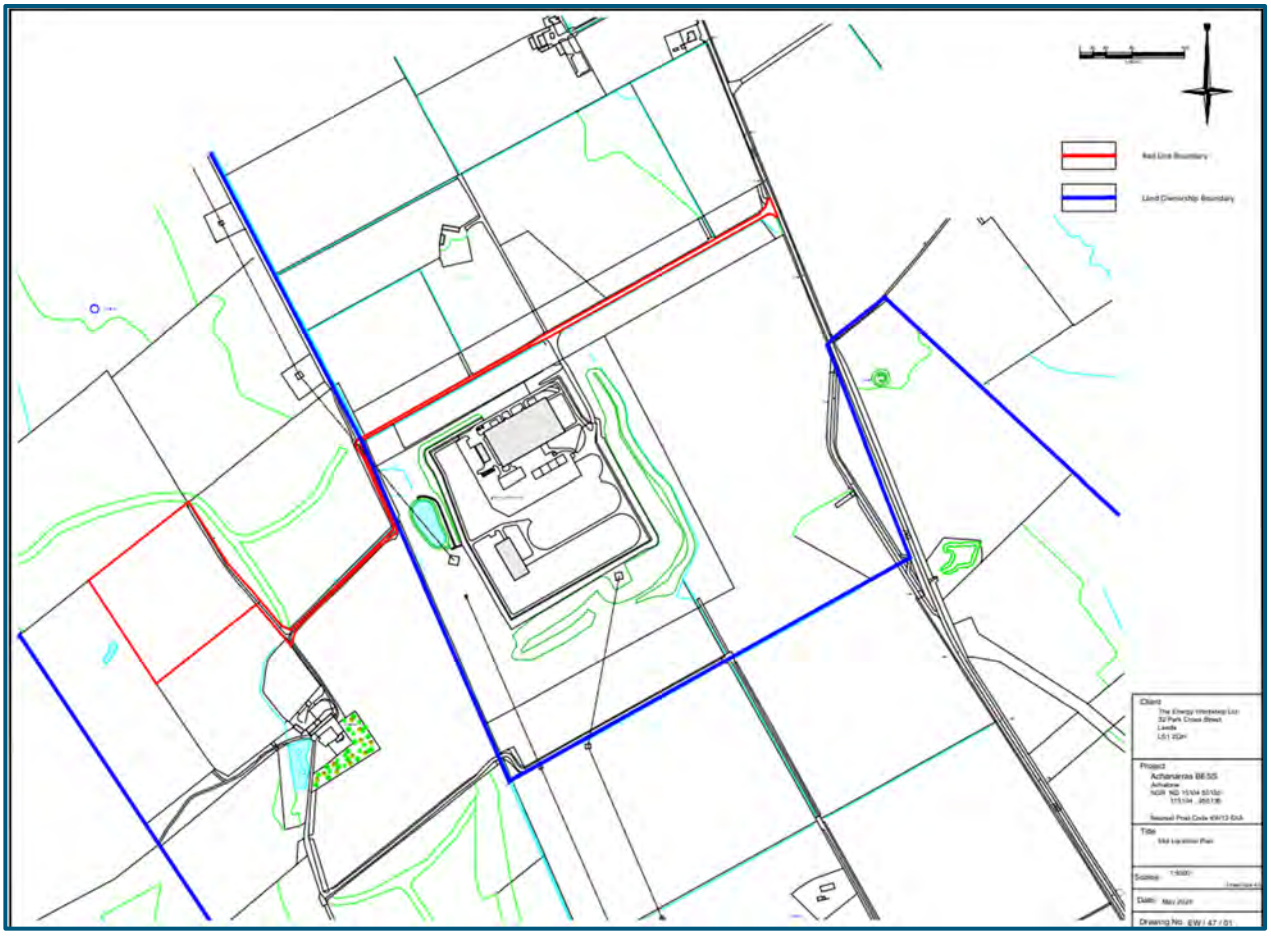
Ouglassy Wind Farm, 2 km north of Spittal. The scoping application decision was issued on 10/06/24, but no further documents are available online at this stage.

6.8 Achanarras BESS

A screening opinion was submitted to the ECU (Ref. ECU00005078) and THC (Ref. 24/02020/SCRE) in May 2024, relating to the construction and operation of a 200 MW BESS, access, landscaping and habitat creation. A screening decision was issued on 11/06/24 and an EIA is not required for this proposed development.

The site is located on land approximately 585 m to the west of SSEN Spittal substation and 800 m to the northwest of the Proposed Development. Access to this proposed development would be via the existing access road off the A9 associated with the SSEN Spittal substation, as indicated in **Figure 6.3**.

Figure 6.3: Location of Achanarras BESS and Access



Source: Achanarras Site Location Plan (EW/47/01) May 2024

There is no transport documentation available associated with this screening opinion, and as such the cumulative impact of this development cannot be accurately assessed.

6.9 Toftingall Wind Farm

A planning application (Ref. 22/06046/PAN) was submitted to THC in December 2022 relating to the erection and operation of a wind farm comprising up to two wind turbines, BESS, access track and associated infrastructure located on land 1,180m southeast of Mybster Inn Farm, Watten. This scheme is located more than 1km from the Proposed Development and there are no transport related documents available. A

decision notice dated 21.03.23 closed this case and as such, this proposed development has not been included in the cumulative impact assessment.

6.10 Spittal – Loch Buidhe – Beauly 400kV Connection

The Spittal – Loch Buidhe – Beauly 400 kV OHL Connection EIA Scoping Report (October 2024) was submitted to ECU (Ref. ECU00006008) and THC (Ref. 24/04588/SCOP). The EIA scoping report is currently under consideration and is associated with a new 400kV overhead transmission line (OHL) supported by steel lattice towers over a distance of approximately 167km, between the new proposed substations at Spittal (Banniskirk), Loch Buidhe (Carnaig) and Beauly (Fanellan). The development comprises the rationalisation and crossing of existing transmission infrastructure to provide connection between Spittal and Loch Buidhe, and between Loch Buidhe and Beauly.

Chapter 12 of the EIA Scoping Report describes the baseline traffic and transport conditions and the potential effects on the existing transport network and sensitive receptors as a result of the construction and operation phases of the proposed development. The report identified that peak vehicle movements will mostly comprise of HGVs, LGVs and cars, and that the potential traffic impacts would be limited to the construction phase only. As such, operational traffic assessment is scoped out of the EIA. The EIA scoping report indicates that a TA would be provided and will focus on the ability of the surrounding road network to accommodate traffic associated with the proposed development. At this stage no transport data or documentation is available, and as such, the cumulative impact of this development cannot be accurately assessed.

6.11 New Quarry: Land 985M NW of Lydias House, Toftingall Farm, Watten

Planning application (Ref. 24/03693/PAN) was submitted to THC in August 2024. This planning application is associated with the formation of a new quarry 34.6 ha in size, located on land 985 m northwest of Lydias House, Toftingall Farm in Watten and adjacent to the northeast of the existing Spittal Quarry. The existing quarry is now depleted of the supply of commercially usable material remaining and the proposed new quarry is intended for the purpose of extracting high grade Caithness flagstone. The extraction of flagstone will be undertaken in phases with an on-going restoration taking place in the quarried areas as the next phase progresses. The quarry is located approximately 2 km southeast of the Proposed Development and would potentially be accessed off the A9 and B870, as indicated in **Figure 6.4**.

Figure 6.4: Location of New Quarry Northwest of Lydias House, Toftingall Farm, Watten

6.12 Approach to Cumulative Development

At present, limited traffic information is available to assess the potential for cumulative effects from other developments. Of the 11 sites identified, three are not expected to proceed at any time. Construction of the remaining eight sites could occur, though this would subject to agreement of planning consents.

Given that the assessment of the construction traffic impact suggests that the A9 in the vicinity of the site would be operating at less than 10% of likely link capacity, there is ample spare capacity was construction of cumulative developments to occur on a similar timeframe as the Proposed Development.

If necessary, the potential cumulative traffic impact of the Proposed Development could be considered at the pre-construction stage, in liaison with other schemes in the wider local area and THC. This approach would allow the impacts to be determined accurately, and appropriate mitigation established once detailed information is available. This approach is consistent with the approach identified in similar BESS developments, and potential schemes in the wider local area.

The anticipated construction traffic demand associated with the Proposed Development shows that peak deliveries would occur within a four-week period associated with the delivery of stone for the construction of the internal roads and platforms on the site. In the event of an overlap in the construction works with other infrastructure schemes in the wider local area, consultation with other parties would be undertaken to avoid simultaneous intensive delivery periods, where practicable.

Where available, the delivery routes, access arrangements and construction traffic demand associated with the proposed and consented developments in the wider local area have been reviewed. It is concluded that the cumulative traffic impact is low given the temporal overlap with other developments and would be effectively managed through the implementation of mitigation measures set out in Section 7 of this report.

7 Outline Construction Traffic Management Plan

This section of the TS sets out the anticipated traffic associated with the construction phase of the Proposed Development; the measures proposed to mitigate the impact of the Proposed Development on the local road network (such as construction vehicle routing and delivery schedules) and sets out the roles and responsibilities of the Logistics Manager.

7.1 Construction Traffic Management

Traffic management works would comply with the provisions of the Traffic Signs Manual Chapter 8: Traffic Safety Measures and Signs for Road Works.

It is proposed that the Logistics Manager appointed by the Contractor would be responsible for the provision of traffic management at the site and would coordinate and manage the construction traffic and deliveries arriving at, and departing from, the site during the construction phase of the Proposed Development. The Logistics Manager would set out the arrival time of deliveries at the site, the anticipated duration of stay and departure time. Deliveries would be scheduled throughout the day to reduce the potential “bunching” of trips associated with deliveries to the site during peak construction periods. This will ensure that deliveries are limited to a maximum of four deliveries per hour, providing sufficient time for the stone to be removed from the vehicles and placed before the next delivery arrives.

The existing road network in the vicinity of the site comprises a two-way single carriageway trunk road (A9) which currently accommodates two-way HGV movement. It is proposed that the Logistics Manager at the site would coordinate and manage the construction traffic arriving at and departing from the site during the construction phase of the Proposed Development. The distance from the proposed BESS and substation compounds to the A9 is approximately 600 m and would take an HGV 1-2 minutes to travel this distance. To mitigate conflict as a result of two-way HGV movements on the single-track access road, the Logistics Manager would schedule deliveries at sufficient intervals. The Logistics Manager would retain outbound vehicles on the site if an inbound HGV and known delivery was scheduled to arrive. The scheduling of HGVs and deliveries would seek to avoid HGVs passing each other along the access road and make use of the new passing place and two-way section of road in the vicinity of the new access junction with the A9. Drawings indicating the location of the passing places on the new access road are located in **Appendix D**.

Existing holding areas or rest stops located on the A9 and A routes on the wider local road network, would be utilised where available.

The surface of the existing access track which extends along the eastern side of the proposed BESS and substation compounds would be improved, and access for emergency vehicles would be well maintained at all times. Should an emergency vehicle require access to the site, the Logistics Manager would be responsible for redirecting incoming HGVs to existing laybys on the A9 or the passing place on the access road, should an emergency vehicle require access to the site. This arrangement would restrict the number of HGVs on the site during an emergency.

As set out in **Section 6** of this TS, the potential cumulative development traffic impacts could be considered at the pre-construction stage. The contractor would liaise with other schemes and Transport Scotland to ensure the impacts are determined accurately, and appropriate mitigation measures are established once detailed information is available. In the unlikely event that there is an overlap in peak construction traffic with other developments, the contractor would coordinate construction traffic deliveries in consultation with other developments and THC, if required.

Furthermore, the local community would receive prior notification of the commencement of construction works at the site. Ongoing community engagement throughout the construction phase is set out in **Section 7.2** of this report.

7.2 Engagement with Local Residents

The Logistics Manager will be responsible for briefing local residents and businesses prior to the commencement of construction work at the site. Notifications relating to the construction phase would comprise:

- the estimated commencement date;
- estimated duration of works;
- operational hours;
- estimated delivery trip schedule; and
- anticipated end date.

The Logistics Manager appointed by the contractor would engage with local residents throughout the pre-construction and construction phase, and should complaints or concerns arise during the construction phase, the Logistics Manager would engage with stakeholders and implement appropriate mitigation as soon as practicable. Further details relating to the roles and responsibilities of the Logistics Manager are set out in **Section 7.6** of this report.

7.3 Vehicle Identification

The contractor would provide an identifying marker to all delivery vehicles. The identifying marker would be A4 in size, easily identifiable and suitable for display in the front window of the vehicles. A copy of the identifying marker should be provided to Transport Scotland and the Highland Council before the commencement of the construction phase.

7.4 Control of Noise and Vibration

The contractor will comply with all relevant environmental and health legislation and take a pro-active approach to minimise the risk of noise and vibration disturbance to site operatives and the general public.

7.5 Maintenance and Repair of the Public Roads

The contractor is responsible for any damage to the local road network, caused by activities associated with the construction of the development. The contractor will comply with the agreed highway maintenance regime, in the vicinity of the site access and on local roads. As part of the Roads (Scotland) Act 1984, a “Wear and Tear” Agreement between the contractor and Transport Scotland will be entered into. Any damage to the A9 or the existing road network as a consequence of the construction activities will be repaired by the contactor, or a financial contribution made to the highway authority to cover the cost of remedial works.

A Course Visual Inspection (CVI) will be undertaken prior to the commencement of construction works to establish the current condition of the road. A further CVI will be undertaken following the completion of the construction phase to determine the impact of the construction vehicles on the roads. Transport Scotland will be given sufficient written notice of the intended timing of the CVIs, to facilitate a representative attending, if required.

Before commencing works on the new access junction which links to the A9, the contractor will obtain the consent of Transport Scotland as the road authority, in line with Section 56 of the Roads (Scotland) Act 1984.

Temporary signage and damage to the local road network as a result of construction activities associated with the Proposed Development will be addressed in line with the Roads (Scotland) Act 1984 will be removed and repaired by the contractor.

7.6 Monitoring, Enforcement and Governance

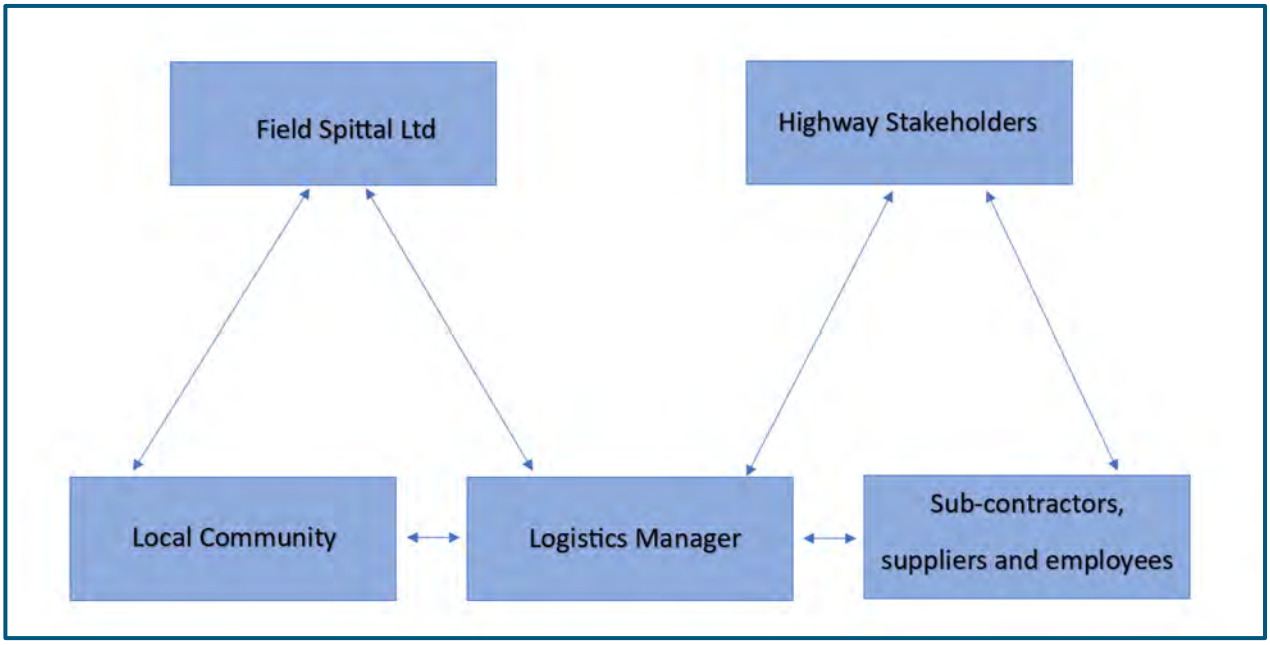
The implementation of the CTMP will be managed by the appointed contractor. The Logistics Manager, appointed by the contractor, will be responsible for the day-to-day organisation and monitoring of construction logistics and traffic management for the site for the duration of the construction phase.

The Logistics Manager role and responsibilities comprise:

- Regular liaison with key personnel at Transport Scotland, THC, local residents and businesses;
- Undertake ongoing monitoring at the site, including the collection of data relating to
  - The number of vehicle movements to and from the site on a daily basis;
  - CTMP breaches and complaints; and
  - Safety (logistics) related incidents.

The Logistics Manager will be appointed prior to the commencement of construction works, and their contact details provided to Transport Scotland, THC and the local community. The role of the Logistics Manager and their relationship with stakeholders is indicated in **Figure 7.1.**

Figure 7.1: Role of Logistics Manager



To ensure that the CTMP is effectively enforced, it is essential to define what constitutes a “breach”. For the construction works, the following actions will constitute a breach of the CTMP and will require the implementation of mitigation and/or corrective measures:

- Construction workers overspill parking on the public highway;

- Construction HGVs not adhering to agreed routes and arrival/ departure times; and
- Construction vehicles being driven inappropriately (e.g., speeding).

Upon receipt of notification of a breach, the Logistics Manager will investigate the circumstances thoroughly and compile a report which would be issued to Transport Scotland and THC. The roads authorities would review the report and request further information or clarification, if required, in order to determine whether a material breach has indeed occurred. The outcome of the review would be communicated to the Logistics Manager. It is the responsibility of the Logistics Manager to report all breach investigations to Transport Scotland as the road authority.

Should the highway authority determine that a material breach has occurred, the following three-stage process would be implemented:

- Stage One - the highway authority highlights a potential breach and requests the Logistics Manger review the data and concerns. The Logistics Manager would then agree the extent of the breach of controls were indeed 'material' and agree an appropriate mitigation or action.
- Stage Two – should a further material breach be identified, the contractor/ supplier would be given a warning and required to provide an action plan to outline an appropriate course of action to rectify the matter, and implement additional mitigation measures, as required.
- Stage Three – Should further breaches occur, the contractor/ supplier would be required to remove the offender from the site, and the contractor/ supplier would receive a formal warning. Any further breaches by individuals associated with the contractor/ supplier may result in the implementation of formal dispute procedures set out in the contract.

7.7 Safety and Environmental Standards and Programmes

This section of the CTMP outlines the measures adopted to maintain high standards of construction safety and limit the disruption to other motorists, local residents and businesses.

7.7.1 Construction Logistics and Community Safety (CLOCS)

The CLOCS Guide[4] draws together evolving and applied best practice drawn from several individual standards, policies and codes of practice to form a single road risk standard. This standard will be implemented and consistently adhered to by the contractor, suppliers, sub-contractors and fleet operators.

The CLOCS Standard[5] defines the primary requirements on all stakeholders associated with a construction project, to control the construction site and the entire supply chain including the operator of any vehicles servicing the site. CLOCS brings these stakeholders together to work collaboratively to maximise the many commercial and social benefits associated with safer, leaner and greener construction logistics. The CLOCS Standard aims to reduce the risk of harm to the local environment and community from construction vehicle journeys.

The Logistics Manager is responsible for developing, monitoring and implementing the CTMP. The contractor shall demonstrate that local community considerations have been considered within the CTMP, and that community engagement is ongoing throughout the construction phase. The CTMP shall:

- Provide input from operators;
- Have considered, agreed and committed to planned measures where practical.

[4] *Construction Logistics and Community Safety Guide: Managing work related road risk Version 1.2 (February 2016)*
[5] *CLOCS Standard Version 4 (August 2022): Ensuring the safest, leanest, and greenest construction vehicle journeys* https://www.clocs.org.uk/page/clocs-standard

- Have risk-assessed and specified the safest vehicle routes and identified acceptable reasons for deviation;
- Define 'last mile' vehicle routes to and from the site, if required;
- Require use of a delivery management system;
- Require competent site access traffic marshals, if required; and
- Maintain the CLP as a 'live' document.

The contractor shall include CLOCS requirements in:

- The procurement strategy;
- Core tender documentation;
- Contracts and/ or purchase order;
- Conditions of contract or equivalent; and
- Site management documentation.

The Logistics Manager's responsibility is to ensure the compliance of operations against the CLOCS Standard and providing monthly reports on the performance of fleet and site operations, and where non-compliance is identified, provide a remedial action plan to address all key issues.

7.7.2 Fleet Operator Recognition Scheme (FORS)

FORS is a voluntary fleet accreditation scheme designed to improve fleet operator performance in key areas such as environmental performance, safety and operation efficiency. The purpose is to improve the quality of fleet operations and to recognise those operators that achieve environmental, safety and efficiency requirements of the FORS standard[6]. FORS membership would be promoted as part of the procurement process associated with construction vehicle operators, without being mandated.

7.7.3 Vehicle Maintenance

All construction vehicles will be required to be fully serviced and maintained to avoid fuel and oil leaks. All vehicle maintenance will be conducted off-site.

7.8 Site Specific Measures

This section of the CTMP sets out a series of specific traffic mitigation measures that will be implemented by the contractor before works commence, in line with best practice. These measures aim to mitigate the potential impacts of construction traffic associated with the development.

7.8.1 Hours of Operation

The site would operate between:

- 07:00 – 19:00 Monday to Friday; and
- 07:00 – 13:00 Saturday

No construction work or deliveries to site would be undertaken on Sundays and/ or Bank Holidays.

[6] https://www.fors-online.org.uk/cms/new-standard/

7.8.2 Construction Worker Travel and Parking

Core construction staff will be encouraged to car share to the site. Sub-contractors will be encouraged to travel to the site in groups. All staff parking will be accommodated at the site.

7.8.3 Non-Motorised Access

Due to the remote rural location of the site, it is not anticipated that pedestrians or cyclists would access the site; however, secure staff cycle parking would be accommodated within the substation welfare building, as required. Should pedestrians or cyclists require access to the site, access would be available through the vehicular access off the A9, with appropriate safe pedestrian routes identified and segregated from site traffic and construction vehicles where required.

8 Summary and Conclusions

This Transport Statement (with OCTMP) has been prepared on behalf of Field, in association with a planning application for the construction and operation of a BESS with a capacity of up to 300 MW located to the south of the Spittal substation off the A9, north of the settlement of Spittal, Scotland. The Proposed Development includes associated infrastructure including cable route, access and ancillary works.

The scope of this report was agreed with Transport Scotland at a scoping meeting held on 29th February 2024.

Surveys of existing traffic conditions on the A9 demonstrate that the road is operating at less than 10% of anticipated link capacity. There are no PICs on the A9 in the vicinity of the site. As such, there are no existing road safety or capacity concerns that would potentially be exacerbated by construction traffic associated with the Proposed Development.

The Proposed Development includes a new vehicular access located on the A9 and a new access road which links to an existing access track which provides access to the BESS and substation compounds. The new access junction will ensure Abnormal Indivisible Loads (AILs) can access the site and minimise impact on the site of historical significance on the existing farm access. The new access will be designed to Transport Scotland requirements.

The highest quantum of trips associated with the Proposed Development would be generated during the construction phase. Vehicle trips associated with the construction phase are based on operations at similar sites operated by Field, and details of the construction traffic demand is set out in **Section 5.1** and summarised in **Table 5.1** and construction traffic routing is set out in **Section 5.2**. It is estimated that a total of 3,063 HGVs and 6,126 two-way HGV trips would be associated with the construction of the Proposed Development over a 24-month period. Peak trips occur during the importation of stone for the construction of the new internal access road, and to the BESS and substation compounds. Over the peak four-week period up to four hourly HGV trips would occur. Over the two-year construction programme there would be an average of five to six deliveries per day.

Operational traffic generated by the Proposed Development is nominal and based on operations at similar Field sites. Estimated operational traffic demand is set out in **Section 5.3** and as such this low quantum of operational trips would not have a detrimental impact on the local road network.

Potential developments in the wider local area that could potentially result in cumulative traffic impacts with the Proposed Development were identified. Given the uncertainty regarding the timing of the potential cumulative developments, and that the A9 is operating at less than 10% of link capacity, there is ample spare capacity. If necessary, the potential cumulative traffic impacts could be detailed at the pre-construction stage, in liaison with the other schemes and Transport Scotland. This approach provides opportunity for more detailed information to be available to all parties, and a more accurate assessment of potential impacts and required mitigation.

The temporary impact of construction traffic associated with the Proposed Development will be mitigated by the measures set out in **Section 7**. The OCTMP addresses:

- The roles and responsibilities of the Logistics Manager, appointed by the contractor;
- The monitoring, enforcement and governance of HGVs accessing the site;
- A strategy to maintain and repair public roads, if required;
- Public engagement measures;
- Environmental standards; and

- Site specific mitigation measures.

The measures that would be adopted to maintain high standards of construction safety and limit the disruption to other motorists, local residents and business are set out in **Section 7.2**. Other measures include compliance with Construction Logistics and Community Safety requirements, Fleet Operator Recognition Scheme and vehicle maintenance set out **Sections 7.6** and **7.7**.

A final Construction Traffic Management Plan would be provided post-planning consent and before commencement of construction.